

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-6 (Cancelled)

7. (Currently Amended) An integrated circuit (IC) assembly for mounting to a surface of a device board comprising:

a plurality of planar ICs each having first contact pads on one surface, which connect to electronic devices in the IC, and conductive columns metallurgically bonded to and extending from individual ones of the contact pads;

a plurality of planar interposers parallel to and interspersed with the plurality of planar ICs, each interposer having second contact pads on at least one surface connected to the conductive columns, and traces on at least one surface connected to the second contact pads, individual ones of the traces leading to electrical contact regions on an edge at a periphery of the individual interposer, the contact regions facing away from the interposer in a direction parallel with at least perpendicular to the one surface;

and a plurality of conductive bars external to the interposers and the ICs and extending in a direction orthogonal to the planar ICs and interposers, the conductive bars metallurgically bonded to individual ones of the outward-facing peripheral contact regions, the bars constraining the interspersed interposers and ICs into a closely-spaced stack and providing common signal paths from the stacked ICs.

8. (Original) The assembly of claim 7 wherein the conductive bars end on one side at a

plane away from one end of the stacked ICs, and are connected to an intermediary board having traces and third contact pads for connecting the IC stack to a printed circuit board (PCB).

9. (Original) The assembly of claim 7, wherein the ICs are memory chips and the PCB is a memory board.

10. (Original) The assembly of claim 7, further comprising a polymer material imposed between interspersed interposers and planar ICs, the polymer layer providing additional support for the stack and the conductive columns.

11. (Currently Amended) A memory module for providing memory resources to a computerized appliance comprising:

a printed circuit board (PCB) having at least one location for mounting an IC assembly; and

an integrated circuit (IC) assembly mounted to the PCB, the assembly comprising a plurality of planar ICs each having first contact pads on one surface, which connect to electronic devices in the IC, and conductive columns metallurgically bonded to and extending from individual ones of the contact pads, a plurality of planar interposers parallel to and interspersed with the plurality of planar ICs, each interposer having second contact pads on at least one surface connected to the conductive columns, and traces on at least one surface connected to the second contact pads, individual ones of the traces leading to electrical contact regions on an edge at a periphery of the individual interposer, the contact regions facing away from the interposer in a direction parallel with at least perpendicular to the one surface, and a plurality of conductive bars external to the ICs and interposers and extending in a direction orthogonal to the planar ICs

and interposers, the conductive bars metallurgically bonded to individual ones of the outward-facing peripheral contact regions, the bars constraining the interspersed interposers and ICs into a closely-spaced stack and providing common signal paths from the stacked ICs to the PCB.

12. (Original) The memory module of claim 11, comprising a plurality of IC packages mounted to both sides of the circuit board of the module.

13. (Currently Amended) An interposer for providing conductive and nonconductive interface between opposing leads of ICs stacked in a packaged IC assembly comprising:  
a non-conductive sheet;  
metal contact pads and traces formed on a surface of the non-conductive sheet, including openings through the non-conductive sheet to expose regions of conductive contact pads or traces; and  
contact regions implemented at a periphery of the non-conductive sheet, connected to traces on the sheet, and facing outward in a direction parallel with the at least perpendicular to the surface of the non-conductive sheet.

14. (Original) The interposer of claim 13, wherein the conductive traces and contact pads are formed from a copper foil applied to the non-conductive sheet by an adhesive.

15. (Currently Amended) The interposing contact element interposer of claim 14, wherein the metal contact pads and traces are formed in a metallic film layer deposited on the interfacing material using one of a deposition, spin-on, or sputtering technology.

16. (Original) The interposer of claim 13, wherein the non-conductive sheet is formed from a BT resin.

17. (Original) The interposer of claim 13 wherein the contact regions are formed by filling holes along a periphery of the non-conductive sheet with solder, then trimming the sheet through the solder-filled holes.

18. (Original) An integrated circuit (IC) assembly for mounting to a surface of a device board comprising:

a plurality of planar ICs each having first contact pads on one surface, which connect to electronic devices in the IC, and conductive columns metallurgically bonded to and extending from individual ones of the contact pads;

an interposer formed of a length of foldable non-conductive material, folded to progressively space apart adjacent ones of the planar ICs in order, the folded interposer having second contact pads on at least one surface connected to the conductive columns of the plurality of ICs, and traces on at least one surface connected to the second contact pads, individual ones of the traces leading to electrical contact regions on the foldable interposer such that the contact regions face away from the assembly in a direction parallel with the plane of the ICs; and

a plurality of conductive bars extending in a direction orthogonal to the planar ICs, the conductive bars metallurgically bonded to individual ones of the outward-facing peripheral contact regions, the bars constraining the interposer and adjacent ICs into a closely-spaced stack and providing common signal paths from the stacked ICs.

19. (Original) The assembly of claim 18 wherein the conductive bars end on one side at a plane away from one end of the stacked ICs, and are connected to an 12 intermediary board having traces and third contact pads for connecting the IC stack to a printed circuit board (PCB).

20. (Original) The assembly of claim 18, wherein the ICs are memory chips and the PCB is a memory board.

21. (Original) The IC package of claim 7, further comprising a polymer material imposed between consecutive ICs and the interposer, the polymer material providing additional support for the stack and the conductive columns.